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Happiness Among College Students: A Cross-Sectional Web-Based Study Among Iranian Medical Students

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Abstract

Background: During the recent decades, happiness and psychological wellbeing have been among the most attractive issues for researchers in the fields of social sciences and health. Medical and paramedical students in comparison with other college students are less happy due to work circumstance in hospital and special education.

Objectives: The aim of the present study was to evaluate happiness among college students of Qazvin University of Medical Sciences in terms of socio-demographic variables.

Materials and Methods: In this cross-sectional web-based study, all the students of Qazvin University of Medical Sciences in Iran who had course classes were invited to participate in the study and 541 students filled out the web-based questionnaire including questions for measuring happiness oxford happiness questionnaire (OHQ), health status, stress experience in the past six months, cigarette and hookah smoking, physical activity rapid assessment of physical activity (RAPA), as well as socio-economic and demographic information.

Results: The mean happiness score was 114.59 ± 18.31. Socio-economic status, physical activity, and experience of stress in the last 6 months were related to the happiness score ($P = 0.009$, $P < 0.001$, $P < 0.001$, respectively). However, gender, cigarette smoking, hookah smoking and body mass index were not significantly correlated with happiness.

Conclusions: The findings of the present study show that a happiness score among our sample study was slightly low and people with high happiness scores had a healthier lifestyle, i.e. more physical activity and less tobacco smoking. College students should be encouraged to do regular exercise as a way to increase the happiness level.

Keywords: Happiness, Tobacco Smoking, Life Satisfaction, Physical Activity, Students

1. Background

Positive psychology has gained the attention of many psychologists and health researchers in recent decades (1, 2). One of the issues in positive psychology is happiness, which is considered an important part of quality of life and is above all the wealth (3). In the new literature, happiness has been defined as the combination of positive affect and lack of negative affect and life satisfaction (4). Happy people present four consistent traits: self-esteem, optimism, sense of self-control, and extroversion (5). In today's world, happiness is taken into consideration as a factor for the prevention of diseases. Increased happiness can be a health promotion strategy that is executed in different societies.

The results of various studies have shown that psychological factors have a positive effect on physical health (6). Health is not only the absence of disease but also, according to world health organization (WHO), the state of physical health as well as mental and social well being (7). Happiness would improve the function of the immune system and predict life expectancy among healthy individuals; this effect is significantly strong. Happiness does not cure diseases, but has a protective effect against them. On the other hand, evidence indicates a negative effect, i.e. depression and anxiety, on health: unhappy states (anger, hostility, depression, etc.) are harmful for the body's long-term effects such as increased blood pressure, and people in these states have weaker immune responses (6).

Studies have demonstrated that happiness is influenced by many factors, including family and social relationships, sports activities, recreational activities (8, 9), religion (10), government (11), health, age, social conditions (12), body mass index (BMI) (13), marital status, occupation, educational level (14), lack of stress in the past 6 months

(15), and tobacco smoking (16, 17). Identifying all such factors helps governments perform necessary reforms to promote happiness in their societies.

Based on an international research, Iranian happiness score was 5.29, which was very low compared with Denmark with the highest score (8.2) (11). Presence of happiness in life would have a major role in the choices we make: type of food, physical activity, and weight control, all of which affect our mental and physical health; also, quality of youth life has changed in today's modern world.

2. Objectives

The aim of the present study was to evaluate happiness among college students of Qazvin University of Medical Sciences in terms of socio-demographic variables.

3. Materials and Methods

3.1. Data Gathering Techniques

In this cross-sectional web-based study, a questionnaire was developed to assess the relationship between happiness and its related factors among the students. All the questions were based on the scientific literature and expert opinions that have been previously used in other studies. In order to assess the content validity of the questionnaire, it was sent to 5 content experts, 6 experts in methodology and development of the questionnaire, and 10 lay experts (nutrition advisors and students) with a response form to comment on the clarity and relevancy of the questions. After receiving the responses and revising the questionnaire, the final questionnaire was designed in Google drive. Then, a small sample of students was asked to fill out the web-based questionnaire for feasibility approval. Institutional review board at Qazvin University of Medical Sciences approved the study's protocol and the related questionnaire.

3.2. Sampling

All the students of Qazvin University of Medical Sciences in Iran who had course classes were invited to participate in the study. The total number of invited students was 1086. Participation was voluntary and anonymous. After preparing the class list, we went to the classes. Then, the purposes of the study were explained and verbal consent was received from all the participants. Then, the students' email addresses were obtained and a paper containing the link address of the questionnaire was given to all the participants. Moreover, this link was emailed to them on the same day and a reminder was also sent for the following 3 weeks. The questionnaires were in the following order: demographic characteristics, health status, stress experience in the past six months, weight, height, physical activity, socio-economic questions (household income and assets), and oxford happiness questionnaire (OHQ) (18). It took approximately 15 - 20 minutes to complete the questionnaires. All the participants were encouraged to provide honest responses.

3.3. Measurements

Happiness was measured by oxford happiness questionnaire (OHQ) (18), which consists of 29 statements ranging from 1 "strongly disagree" to 6 "strongly agree". Examples of the items are "Life is good," and "I am well satisfied about everything in my life". Happiness score ranges from 29 to 174; higher scores indicate higher happiness. The reliability and validity of this questionnaire among the university students in Iran were confirmed by Liaghatdar.

Physical activity was measured by the rapid assessment of physical activity (RAPA) (19). It is a 9-item, self-administered questionnaire regarding current levels of physical activity. The rapid assessment of physical activity evaluates a wide range of physical activity levels, from sedentary to vigorous activity, and assesses the number of reported days of moderate activity (for at least 30 minutes) and vigorous activity (for at least 20 minutes) as well as strength and flexibility training. Each question has a 'Yes' or 'No' option. The total score of the first seven items is out of 7; participants choose which question corresponds to their activity level. Any score of less than 6 is considered suboptimal. Strength training and flexibility are scored separately (strength training = 1, flexibility = 2, both = 3). The validity and reliability of the Persian version of this questionnaire have been approved recently (20).

The principal component analysis (PCA) was employed to measure the socioeconomic status of the students based on the information collected about household income and assets. Based on the PCA results, we classified students into three SES groups viz. high, middle, and low socioeconomic status.

Experience of stress in the past 6 months was measured by the following question: 'Have you experienced severe stress in the past 6 months? ' Responses were 'Yes' or 'No'.

Having a defined disease was assessed by two questions. The first one was: 'Do you have any defined diseases? ' with responses 'Yes' or 'No' and the second question was 'If you have a disease, please write down its name in the following box'.

Smoking statue was assessed by this question: 'Which option describes your smoking statue well?' The answers were 'never smoker', 'experimenter (less than 100

cigarettes)', 'occasional smoker', 'regular smoker', and 'ex - smoker'.

Hookah statue was measured by this question: 'Which option describes your hookah statue well?' The answers were 'never smoker', 'experimenter', 'occasional smoker', 'at least once per month', and 'at least once per week'.

3.4. Data Analysis

One-way analysis of variance (with Tukey's post-hoc test), independent sample t-test, and Pearson's correlation coefficient were used to assess the relationship between happiness and the independent variables by SPSS 22 software.

4. Results

Out of 1086 sampled students, 541 participated in the study and filled out the web-based questionnaire (with 49.82% response rate). The mean and standard deviation of the students' age who participated in the study were 24.14 $\pm$ 4.88 (18 - 46 years old). Also, 403 (75.4%) of the sample students were females and 138 (25.5%) were males. The mean happiness score was 114.59 $\pm$ 18.31 (min: 44 and max: 157). Table 1 shows the mean and standard deviation of the happiness score by demographic and key variables. As can be seen in Table 1, SES, physical activity, and experience of stress in the last 6 months were related to the happiness score. However, gender, marital status, year of education, cigarette smoking status, hookah smoking status, BMI, and having a defined disease did not have statistically significant association with the happiness score. Also, the results of Pearson's correlation showed that the happiness score was positively correlated with students' age (r = 0.146, P = 0.001).

5. Discussion

In this study, the mean Oxford happiness score was 114.59 $\pm$ 18.31. Recent studies among Turkish university students have represented the mean Oxford happiness score of 119.92 and 115.81 (21, 22). It can be said that the group of students in the current study had lower scores in terms of happiness than Turkish students.

The results indicated that SES, age, physical activity, and experience of stress in the last 6 months were significantly related to happiness among university students.

Students who had higher SES were happier. A previous study demonstrated that people in rich countries had more happiness and those who had higher income were the happiest (23). Another study found similar results for Korean adults (12). Poorer socio-economic background associated with depression symptom was observed among the university students of 23 countries (23). However, the results of a survey of 15 countries showed that happiness was weakly related to the socio-economic situation (24).

Physical activity and happiness in our study were significantly related so that those who regularly performed heavy exercises for more than a half-hour 5 days per week showed maximum happiness, which was consistent with the results of previous studies. Our findings were consistent with the results of studies among children (9), Iranian teenage girls (8), Chilean students (16), Korean adults (12), and the elderly (25). Increased duration of exercise can lead to improved mood (26). People who do exercises have higher levels of self-esteem and happiness (27, 28). A longitudinal study showed increased happiness and reduced depressive symptoms of women for up to three and a half years after the intervention which was a program of physical activity (29). However, a systemic review reported that exercise can reduce negative temper nor increase positive temper (30). So, interventions of sports programs in all age groups can help not only improve health community and prevent diseases, but also improve mental health and cause happier feeling, decreased depression, and negative feeling.

The results of the present study showed that students with stress experience in the last 6 months had a lower happiness score than those without stress experience in the last 6 months (111 vs. 120). Previous studies have found a relationship between happiness and stress (12, 16). Another study indicated an inverse association between happiness and understanding of stress among college students (31). Another work showed that people who had better social relationships (feeling of more intimacy with a family member and friends) and used stress management techniques had more happiness and less stress (32).

People around the world seem to share an emotional design in life, which is shaped like the letter U. Levels of happiness are the highest when people are young and when they are old. In the middle, however, most people's happiness and life satisfaction levels drop (33).

In contrast, education groups differ in their trends: highly educated people become happier over the life cycle, where life satisfaction is decreased for less educated people (34). A recent study has represented that pleasure, joy, and happiness in wealthy countries are relatively constant throughout life, but in poor countries, they slightly decrease with increasing age (35). We found a significantly positive relationship between age and happiness of the students.

The results of the present investigation showed that happiness score among noncigarette smokers was more

Table 1. Comparison of the Happiness Score With Demographic and Key Variables

Variable	N	Mean ± Standard Deviation	P Value
Gender			0.617
Male	138	114.82 ± 18.43	
Female	403	113.92 ± 18.01	
Marital status			0.059
Single	456	113.95 ± 18.52	
Married	85	118.04 ± 16.83	
Year of education			0.422
First year	147	113.56 ± 18.64	
Others	394	114.98 ± 18.2	
Socio-economic status			0.009[a]
Low	134	110.38 ± 17.8	
Medium	271	115.9 ± 17.76	
High	135	116.16 ± 19.45	
Cigarette smoking			0.213
Never smoker	428	115.28 ± 17.02	
Experimenter	79	112.51 ± 23.64	
Regular smoker	34	110.79 ± 19.65	
Hookah smoking			0.289
Never smoker	306	115.07 ± 17.33	
Experimenter	155	115.54 ± 18.79	
Occasionally	56	110.91 ± 21.56	
Regular smoker	24	111.08 ± 18.83	
Body mass index			0.577
Low weight	56	111.64 ± 17.27	
Normal	387	114.69 ± 18.8	
Over weight	83	115.78 ± 17.44	
Obesity	15	116.53 ± 14.25	
Physical activity			< 0.001[b]
Sedentary	39	108.92 ± 23.1	
Light and regular activity	128	112.23 ± 17.19	
Insufficient activity	151	111.74 ± 17.49	
Sufficient activity	223	118.88 ± 17.78	
Stress experience in the last 6 months			< 0.001
Yes	368	111.75 ± 18.44	
No	173	120.64 ± 16.53	
Having a defined disease			0.195
No	505	114.32 ± 18.44	
Yes	36	118.43 ± 16.17	

[a] Results of Tukey's test showed that the happiness score of low socio-economic class was statistically different from that of middle and high classes (P = 0.012 and P = 0.026, respectively). However, the happiness score of middle and high socio-economic classes were the same (P = 0.990).
[b] Results of Tukey's test showed that the happiness score of sufficient activity was statistically different from that of other three levels (P < 0.01).

than experimenters or regular smokers. When it comes to hookah smoking, students who occasionally or regularly smoked hookah had a lower happiness score than other students. However, these results were not statistically significant. Previous studies have shown a significant association between tobacco smoking and happiness (16, 36). Chang et al. concluded in their study that smoking makes people happy in France, but in Japan, France, and the UK, people smoke less if they feel happy (37).

There are several limitations in the present study. It was a web-based study; so, students were supposed to have access to the Internet in order to read and complete the questionnaire. In addition, about half of the student community did not participate in this study, which might affect the results. Finally, the main limitation was the cross-sectional nature of the study, which limited the conclusion. This study aimed to investigate the relationship between various factors and happiness; this relation-

ship could be reciprocal, meaning that having a healthy lifestyle leads to an increase in happiness or happiness leads us to healthy behavioral patterns.

In conclusion, the findings of the present study showed that happiness score was slightly low among our sample study and people with high happiness scores had healthier lifestyle, i.e. more physical activity and less tobacco smoking. Regular exercise and physical activity could increase happiness. So, college students should be encouraged to do regular exercise as a way to increase the happiness level.

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Footnote

Authors' Contribution: Azadeh Lesani, Maryam Javadi and Asghar Mohammadpoorasl: study design and data collection; Azadeh Lesani and Asghar Mohammadpoorasl: data analysis; Hossein Ansari: academic writing; Ali Fakhari: Critical revision of the manuscript and study supervision.

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